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ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY CLASS I PERMIT

COMPANY NAME:	Griffith Energy, LLC
FACILITY NAME:	Griffith Energy
PERMIT NUMBER:	1000940
ORIS CODE:	55124
DATE ISSUED:	August 31, 1999
EXPIRY DATE:	August 31, 2004

SUMMARY

This operating permit is issued to Griffith Energy LLC, the Permittee, for operation of the proposed Griffith Energy power generating plant, located approximately 9 miles southeast of the town of Kingman in Mohave County, Arizona. The proposed plant is planned to interconnect with the transmission system in the area that is owned and operated by the Western Area Power Administration. The interconnection would integrate the power generated by Griffith Energy into the regional transmission grid and would allow Griffith to supply power and capacity to the competitive electric wholesale market.

The Griffith Energy power generation facility consists of a 650 megawatt (MW), natural gas fired, combined cycle generating facility and on-site supporting infrastructure including an administration building, warehouse storage, auxiliary boiler, water treatment and storage facilities, cooling towers, gas conditioning equipment, and new access roads. The plant and infrastructure will occupy approximately 45 acres of a 160-acre site in the Mohave County I-40 Industrial Corridor.

The plant will include two combustion turbine generators (CTGs) in conjunction with two heat recovery steam generators (HRSGs). Control equipment will include low NOx burners and selective catalytic reduction (SCR), for the two CTG/HRSG units and low NOx burners and flue gas recirculation (FGR) for the auxiliary boiler. The plant will have a base load rating of 520 MW. The only fuel will be pipeline quality natural gas.

All definitions, terms, and conditions used in this permit conform to those in the Arizona Administrative Code R18-2-101 et. seq. (A.A.C.) and 40 Code of Federal Regulations (CFR), except as otherwise defined in this permit. Unless noted otherwise, references cited in the permit conditions refer to the A.A.C. All material permit conditions have been identified within the permit by a double underline. All terms and conditions in this permit are enforceable by the Administrator of the U.S. Environmental Protection Agency, except for those terms and conditions that have been designated as “State Requirements”.

Griffith is a major source because the potential emission rates of the following pollutants are greater than 100 tons per year: (I) particulate matter, (ii) nitrogen oxides, (iii) carbon monoxide, and (iv) volatile organic compounds. Griffith is subject to the Acid Rain Program of the Clean Air Act. This permit is issued in accordance with Title V of the Clean Air Act, and Title 49, Chapter 3 of the Arizona Revised Statutes.

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Table 1: Summary of Permit Requirements

This table summarizes certain requirements that are applicable to Griffith Energy operations. It is intended for reference use only. The enforceable terms and conditions of this permit are contained in Attachments A through F of this permit.

Emission Unit[1]	Pollutants Emitted	Control Measure	Emission Limits[2] / Standards (Per Stack)	Monitoring /Recordkeeping	Reporting[3]	Testing Frequency/ Methods
POINT SOURCE **P1. And P2. Combustion Turbine Generator (CTG)/Heat Recovery Steam Generator (HRSG) - West and East Stack, respectively, with supplemental duct firing. (Data presented on a per stack basis.)** **Fuel - Natural gas (pipeline quality)** A.A.C. R18-2-901, 40CFR60 Subpart GG and 40CFR60 Subpart Da	Visible Emissions	Combustion Control	Opacity ≤ 10%	---	Quarterly excess emission reports.	Initial performance test EPA Reference Method 9
	PM	Combustion Control	28.2 lb/hr and 5.2 ng/joule heat input (0.012 lb/MMBtu)	---	---	Initial performance test EPA Reference Method 5
	SO_2	Limit sulfur content in fuel to 0.75 grains/100 dscf	5.7 lb/hr and 0.99 ng/joule heat input (0.0023 lb/MMBtu)	FERC-approved tariff agreement containing sulfur content and lower heating value	Quarterly excess emission reports.	Initial performance test EPA Reference Method 19
	NO_x	SCR and low NOx combustors	28.6 lb/hr and 3.0 ppmvd @15% O_2 except during startup and shut down. During startup and shutdown the limit is 5.2 lb/min	CEMS (Compliance)	All applicable requirements. Quarterly excess emission reports.	Initial performance test EPA Reference Method 20
	CO	Combustion Control	98.5 lb/hr and 20 ppmvd at 15% O_2 except during startup and shut down. During startup and shutdown the limit is 124 lb/min	CEMS (Compliance)	Quarterly reporting frequency.	Initial performance test EPA Reference Method 10
	VOCs	Combustion Control	35.2 lb/hr and 6.3 ng/joule heat input (0.015 lb/MMBtu) except during startup and shut down. During startup and shutdown the limit is 28.5 lb/min	---	---	Initial and annual performance tests EPA Reference Method 25A & 18

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Emission Unit[1]	Pollutants Emitted	Control Measure	Emission Limits[2] / Standards (Per Stack)	Monitoring /Recordkeeping	Reporting[3]	Testing Frequency/ Methods
POINT SOURCE **P1. And P2. Combustion Turbine Generator (CTG)/Heat Recovery Steam Generator (HRSG) - West and East Stack, respectively, without supplemental duct firing. (Data presented on a per stack basis.)** **Fuel - Natural gas (pipeline quality)** A.A.C. R18-2-901, 40CFR60 Subpart GG	Visible Emissions	Combustion Control	Opacity ≤ 10%	---	Quarterly excess emission reports.	Initial performance test EPA Reference Method 9
	PM	Combustion Control	17.8 lb/hr and 4.7 ng/joule heat input (0.011 lb/MMBtu)	---	---	Initial performance test EPA Reference Method 5
	SO_2	Limit sulfur content in fuel to 0.75 grains/100 dscf	4.2 lb/hr and 0.99 ng/joule heat input (0.0023 lb/MMBtu)	FERC-approved tariff agreement containing sulfur content and lower heating value	Quarterly excess emission reports.	Initial performance test EPA Reference Method 19
	NO_x	SCR and low NOx combustors	21.1 lb/hr and 3.0 ppmvd @15% O_2 except during startup and shut down. During startup and shutdown the limit is 5.2 lb/min	CEMS (Compliance)	All applicable requirements. Quarterly excess emission reports.	Initial performance test EPA Reference Method 20
	CO	Combustion Control	29.5 lb/hr and 10 ppmvd at 15% O_2 except during startup and shut down. During startup and shutdown the limit is 124 lb/min	CEMS (Compliance)	Quarterly reporting frequency.	Initial performance test EPA Reference Method 10
	VOCs	Combustion Control	7.4 lb/hr and 1.7 ng/joule heat input (0.0041 lb/MMBtu) except during startup and shut down. During startup and shutdown the limit is 28.5 lb/min	---	---	Initial and annual performance tests EPA Reference Method 25A & 18
P3. Auxiliary Boiler **Fuel- Natural gas** (pipeline quality) A.A.C. R18-2-901, 40CFR60 Subpart Dc	Visible Emissions	Combustion Control	Opacity ≤ 10%	---	Report all instances of opacity ≥ 15%. Quarterly excess emission reports.	---
	PM	No controls	0.19 lb/hr and 2.2 ng/joule heat input (0.0050 lb/MMBtu)	---	---	Initial performance test EPA Reference Method 5

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Emission Unit[1]	Pollutants Emitted	Control Measure	Emission Limits[2] / Standards (Per Stack)	Monitoring /Recordkeeping	Reporting[3]	Testing Frequency/ Methods
	SO2	Limit sulfur content in fuel to 0.75 grains/100 dscf	0.09 lb/hr and 0.99 ng/joule heat input (0.0024 lb/MMBtu)	FERC-approved tariff agreement containing sulfur content and lower heating value	---	---
	NO_x	Low NOx burner and FGR	3.5 lb/hr and 40 ng/joule heat input (0.092 lb/MMBtu)	Daily fuel usage.	---	Initial performance test EPA Reference Method 7E (with 3A)
	CO	Combustion Control	2.1 lb/hr and 24 ng/joule heat input (0.055 lb/MMBtu)	Daily fuel usage.	---	Initial performance test EPA Reference Method 10
	VOC	Combustion Control	0.49 lb/hr and 5.6 ng/joule heat input (0.013 lb/MMBtu)	Daily fuel usage.	---	Initial performance test EPA Reference Method 25A & 18
P4. Main Cooling Tower A.A.C. R18-2-730	Visible Emissions	No Controls	Opacity ≤ 5 %	---	---	---
	PM	High Efficiency Drift Eliminators	5.9 lb/hr, and 0.83 lb/million gallon circulated	---	---	---
P5. Chiller Cooling Tower A.A.C. R18-2-730	Visible Emissions	No Controls	Opacity ≤ 5 %	---	---	---
	PM	High Efficiency Drift Eliminators	1.4 lb/hr, and 0.88 lb/million gallon circulated	---	---	---
F1. All Non-point Sources	Visible Emissions	—	Opacity ≤ 40% Frequently used roads will be paved.	—	—	---

Note: --- Not required

[1] All emission units are subject to Best Available Control Technology (BACT), per A.A.C. R18-2-406

[2] Limits based on lb/MMBtu are determined relative to the high heating value of the fuel

[3] Semiannual compliance certification required for all emission units

ATTACHMENT "A": GENERAL PROVISIONS

Air Quality Control Permit No. 1000940
For
Griffith Energy LLC

I. PERMIT EXPIRATION AND RENEWAL [A.R.S. § 49-426.F, A.A.C. R18-2-304.C.2 and 306.A.1]

A. This permit is valid for a period of five years from the date of issuance of the permit.

B. The Permittee shall submit an application for renewal of this permit at least 6 months, but not more than 18 months prior to the date of permit expiration.

II. COMPLIANCE WITH PERMIT CONDITIONS

[A.A.C. R18-2-306.A.8.a and b, A.R.S. § 49-463, and A.R.S. §49-464]

A. The Permittee shall comply with all the conditions contained in Attachments "A" through "F" of this permit including all applicable requirements of Arizona air quality statutes and the air quality rules. Any permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act.

B. Need to halt or reduce activity not a defense. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

III. PERMIT REVISION, REOPENING, REVOCATION AND REISSUANCE, OR TERMINATION FOR CAUSE [A.A.C. R18-2-306.A.8.c, 321.A]

A. The permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, or termination; or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

B. The permit shall be reopened and revised under any of the following circumstances:

1. Additional applicable requirements under the Act become applicable to the Class I source. Such reopening shall only occur if there are three or more years remaining in the permit term. The reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to R18-2-322(B). Any permit revision required pursuant to this subparagraph shall comply with provisions in R18-2-322 for permit renewal and shall reset the five year permit term.

2. Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the Class I permit.

3. The Director or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

4. The Director or the Administrator determines that the permit needs to be revised or revoked to assure compliance with the applicable requirements.

C. Proceedings to reopen and issue a permit, including appeal of any final action relating to a permit reopening, shall follow the same procedures as apply to initial permit issuance and shall, except for reopenings under paragraph 1 above, affect only those parts of the permit for which cause to reopen exists. Such reopenings shall be made as expeditiously as practicable. Permit reopenings for reasons other than those stated in paragraph III.B.1 of this Attachment shall not result in a resetting of the five year permit term.

IV. POSTING OF PERMIT [A.A.C. R18-2-315]

A. Permittee shall post such permit, or a certificate of permit issuance where the facility is located in such a manner as to be clearly visible and accessible. All equipment covered by the permit shall be clearly marked with one of the following:

1. Current permit number.

2. Serial number or other equipment number that is also listed in the permit to identify that piece of equipment.

B. A copy of the complete permit shall be kept on the site.

V. FEE PAYMENT [A.A.C. R18-2-326, 306.A.9]

Permittee shall pay fees to the Director pursuant to A.R.S. § 49-426(E) and A.A.C. R18-2-326.

VI. ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE [A.A.C. R18-2-327]

A. Permittee shall complete and submit to the Director an annual emissions inventory questionnaire. The questionnaire is due by March 31 or ninety days after the Director makes the inventory form available each year, whichever occurs later, and shall include emission information for the previous calendar year.

B. The questionnaire shall be on a form provided by the Director and shall include the information required by A.A.C. R18-2-327.

VII. COMPLIANCE CERTIFICATION

A. Permittee shall submit a compliance certification to the Director twice each year, which describes the compliance status of the source with respect to each permit condition. The first certification shall be submitted no later than April 30th, and shall report the compliance status of the source during the period between October 1st of the previous year, and March 31st of the current year. The second certification shall be submitted no later than October 31st, and shall report the compliance status of the source during the period between April 1st and September 30th of the current year. The initial compliance certification shall reflect compliance status of the source beginning the date of permit issuance. [A.A.C. R18-2-309.2.a]

The compliance certifications shall include the following:

1. Identification of each term or condition of the permit that is the basis of the certification; [A.A.C. R18-2-309.2.c.i]

2. Compliance status with each applicable requirement; [A.A.C. R18-2-309.2.c.ii]

3. Whether compliance was continuous or intermittent; [A.A.C. R18-2-309.2.c.iii]

4. Method(s) used for determining the compliance status of the source, currently and over the reporting period; [A.A.C. R18-2-309.2.c.iv]

5. A progress report on all outstanding compliance schedules submitted pursuant to Section XII.D of this Attachment. Progress reports submitted with compliance certifications satisfy the reporting requirements of A.A.C. R18-2-309.5.d. [A.A.C. R18-2-309.5.d]

B. A copy of all compliance certification for Class I permits shall also be submitted to the EPA Administrator. [A.A.C. R18-2-309.2.d]

VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS [A.A.C. R18-2-309.3]

Any document required to be submitted by this permit, including reports, shall contain a certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this part shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

IX. INSPECTION AND ENTRY [A.A.C. R18-2-309.4]

The Permittee shall allow the Director or the authorized representative of the Director upon presentation of proper credentials to:

A. Enter upon the Permittee's premises where a source is located or emissions-related activity is conducted, or where records are required to be kept under the conditions of the permit;

B. Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;

C. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;

D. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and

E. Record any inspection by use of written, electronic, magnetic and photographic media.

X. PERMIT REVISION PURSUANT TO FEDERAL HAZARDOUS AIR POLLUTANT STANDARD [A.A.C. R18-2-304.C]

If this source becomes subject to a standard promulgated by the Administrator pursuant to section 112(d) of the Act, then the Permittee shall, within twelve months of the date on which the standard is promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard.

XI. ACCIDENTAL RELEASE PROGRAM [40 CFR 68]

If this source becomes subject to the provisions of 40 CFR Part 68, then the Permittee shall comply with these provisions according to the time line specified in 40 CFR Part 68.

XII. REPORTING OF EXCESS EMISSIONS, PERMIT DEVIATIONS, AND EMERGENCIES

A. EXCESS EMISSIONS REPORTING [A.A.C R18-2-310.C]

1. Excess emissions, as defined in A.A.C. R18-2-101.37, shall be reported as follows:

   a. The Permittee shall report to the Director any emissions in excess of the limits established by this permit. Such report shall be in two parts as specified below:

      (1) Notification by telephone or facsimile within 24 hours of the time when the Permittee first learned of the occurrence of excess emissions including all available information from paragraph b. of this subsection.

      (2) Detailed written notification within 72 hours of the notification pursuant to subparagraph (1) of this paragraph.

   b. Report shall contain the following information:

      (1) Identity of each stack or other emission point where the excess emissions occurred.

      (2) Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions.

      (3) Date, time and duration or expected duration of the excess emissions.

      (4) Identity of the equipment from which the excess emissions emanated.

      (5) Nature and cause of such emissions.

      (6) If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions.

      (7) Steps taken to limit the excess emissions. If the excess emissions resulted from start-up or malfunction of Unit 1 or 2, the report shall contain a list of the steps taken to comply with the permit procedures.

2. In the case of continuous or recurring excess emissions, the notification requirements of this section shall be satisfied if the source provides the required notification after excess emissions are first detected and includes in such notification an estimate of the time the excess emissions will continue. Excess emissions occurring after the estimated time period or changes in the

nature of the emissions as originally reported shall require additional notification pursuant to subsection A.1.a.(2) of this Section. [A.A.C. R18-2-310.D]

3. It shall be the burden of the Permittee to demonstrate, through submission of the data and information required by Section XII.A of Attachment "A", that all reasonable and practicable measures within the Permittee's control were implemented to prevent the occurrence of excess emissions. [A.A.C. R18-2-310.B]

B. PERMIT DEVIATIONS REPORTING [A.A.C. R18-2-306.A.5]

1. A deviation means any situation in which an emissions unit fails to meet a permit term or condition. A deviation is not always a violation. A deviation can be determined through observation or through review of data obtained from any testing, monitoring, or recordkeeping established in this permit. For a situation lasting more than 24 hours which constitutes a violation, each 24 hour period is considered a separate deviation. Included in the meaning are any of the following:

   a. A situation where emissions exceeded an emission limitation or standard;
   b. A situation where process or control device parameter values indicate that an emission limitation or standard has not been met;
   c. A situation in which observations or data collected demonstrates noncompliance with an emission limitation or standard or any work practice or operating condition required by the permit.

2. Permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. Prompt reporting shall mean that the report was submitted to the Director by certified mail, facsimile, or hand delivery within two working days of the time the deviation occurred.

3. All instances of deviations from permit requirements shall be clearly identified in the required semiannual monitoring report specified in Attachment "B", Section III.B, and shall be certified by the responsible official. [A.A.C. R18-2-306.A.5.a]

C. EMERGENCY PROVISION REPORTING [A.A.C. R18-2-306.E]

1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

   a. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of paragraph (c) of this subsection are met.

b. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An emergency occurred and that the permittee can identify the cause(s) of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and

(4) The permittee submitted notice of the emergency to the Director by certified mail, facsimile, or hand delivery within two working days of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.

c. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

d. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

D. For any excess emission or permit deviation that cannot be corrected within 72 hours, the Permittee is required to submit a compliance schedule to the Director within 21 days of such occurrence. The compliance schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with the permit terms or conditions that have been violated. [ARS §49-426.I.5]

XIII. RECORD KEEPING REQUIREMENTS [A.A.C. R18-2-306.A.4]

A. Permittee shall keep records of all required monitoring information including, but not limited to, the following:

1. The date, place as defined in the permit, and time of sampling or measurements;

2. The date(s) analyses were performed;

3. The name of the company or entity that performed the analyses;

4. A description of the analytical techniques or methods used;

5. The results of such analyses; and

6. The operating conditions as existing at the time of sampling or measurement.

B. Permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings or

other data recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

XIV. REPORTING REQUIREMENTS [A.A.C. R18-2-306.A.5.a]

Permittee shall submit the following reports:

A. Compliance certifications in accordance with Section VII of Attachment "A".

B. Reports of excess emissions, permit deviations, and emergencies in accordance with Section XII of Attachment "A".

C. Other reports required by Section III of Attachment "B".

XV. DUTY TO PROVIDE INFORMATION [A.A.C. R18-2-304.G and 306.A.8.e]

A. The Permittee shall furnish to the Director, within a reasonable time, any information that the Director may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Director copies of records required to be kept by the permit. For information claimed to be confidential, the Permittee shall furnish an additional copy of such records directly to the Administrator along with a claim of confidentiality.

B. If the Permittee has failed to submit any relevant facts or if the Permittee has submitted incorrect information in the permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.

XVI. PERMIT AMENDMENT OR REVISION [A.A.C. R18-2-318, 319 and 320]

Permittee shall apply for a permit amendment or revision for changes to the facility which do not qualify for a facility change without revision under Section XVII, as follows:

A. Administrative Permit Amendment (A.A.C. R18-2-318);

B. Minor Permit Revision (A.A.C. R18-2-319);

C. Significant Permit Revision (A.A.C. R18-2-320).

The applicability and requirements for such action are defined in the above referenced regulations.

XVII. FACILITY CHANGE WITHOUT PERMIT REVISION [A.A.C. R18-2-317]

A. Permittee may make changes at the permitted source without a permit revision if all of the following apply:

1. The changes are not modifications under any provision of Title I of the Act or under A.R.S. § 49-401.01(17).

2. The changes do not exceed the emissions allowable under the permit whether expressed therein as a rate of emissions or in terms of total emissions.

3. The changes do not violate any applicable requirements or trigger any additional applicable requirements.

4. The changes satisfy all requirements for a minor permit revision under R18-2-319(A).

5. The changes do not contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

B. The substitution of an item of process or pollution control equipment for an identical or substantially similar item of process or pollution control equipment shall qualify as a change that does not require a permit revision, if it meets all of the requirements of subsections (A) and (C) of this Section.

C. For each such change under subsections A and B of this Section, a written notice by certified mail or hand delivery shall be received by the Director and, for Class I permits, the Administrator, a minimum of 7 working days in advance of the change. Notifications of changes associated with emergency conditions, such as malfunctions necessitating the replacement of equipment, may be provided less than 7 working days in advance of the change but must be provided as far in advance of the change as possible or, if advance notification is not practicable, as soon after the change as possible. Each notification shall include:

1. When the proposed change will occur.

2. A description of each such change.

3. Any change in emissions of regulated air pollutants.

4. The pollutants emitted subject to the emissions trade, if any.

5. The provisions in the implementation plan that provide for the emissions trade with which the source will comply and any other information as may be required by the provisions in the implementation plan authorizing the trade.

6. If the emissions trading provisions of the implementation plan are invoked, then the permit requirements with which the source will comply.

7. Any permit term or condition that is no longer applicable as a result of the change.

XVIII. PERFORMANCE TESTING REQUIREMENTS [A.A.C. R18-2-312]

A. Operational Conditions During Performance Testing

Performance tests shall be conducted during operation at the full load of each unit under representative operational conditions unless other conditions are required by the applicable test method or in this permit. With prior written approval from the Director, testing may be performed at a lower rate. Operations during start-up, shutdown, and malfunction (as defined in A.A.C. R18-2-101) shall not constitute representative operational conditions unless otherwise specified in the applicable standard.

B. Performance tests shall be conducted and data reduced in accordance with the test method and procedures contained in the Arizona Testing Manual unless modified by the Director pursuant to A.A.C. R18-2-312.B.

C. Performance Test Plan

At least 14 calendar days prior to performing a test, the owner or operator shall submit a test plan to the Director, in accordance with the Arizona Testing Manual. This test plan must include the following:

1. test duration;
2. test location(s);
3. test method(s); and
4. source operation and other parameters that may affect test results.

D. Stack Sampling Facilities

Permittee shall provide or cause to be provided, performance testing facilities as follows:

1. Sampling ports adequate for test methods applicable to the facility;
2. Safe sampling platforms;
3. Safe access to sampling platforms; and
4. Utilities for sampling and testing equipment.

E. Interpretation of Final Results

Each performance test shall consist of three separate runs using the required test method. Each run shall be conducted in accordance with the applicable standard and test method. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. If a sample is accidentally lost or conditions occur which are not under the Permittee's control and which may invalidate the run, compliance may, upon the Director's approval, be determined using the arithmetic mean of the other two runs. If the Director, or Director's designee, is present, tests may only be stopped with the Director's or such designee's approval. If the Director or the Director's designee is not present, tests may only be stopped for good cause. Good cause includes forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions or other conditions beyond the Permittee's control. Termination of any test without good cause after the first run is commenced shall constitute a failure of the test. Supporting documentation which demonstrates good cause must be submitted.

F. Report of Final Test Results

A written report of the results of all performance tests shall be submitted to the Director within 30 days after the test is performed. The report shall be submitted in accordance with the Arizona Testing Manual and A.A.C. R18-2-312.A.

XIX. PROPERTY RIGHTS [A.A.C. R18-2-306.A.8.d]

This permit does not convey any property rights of any sort, or any exclusive privilege.

XX. SEVERABILITY CLAUSE [A.A.C. R18-2-306.A.7]

The provisions of this permit are severable. In the event of a challenge to any portion of this permit, or if any portion of this permit is held invalid, the remaining permit conditions remain valid and in force.

XXI. PERMIT SHIELD [A.A.C. R18-2-325]

Compliance with the conditions of this permit shall be deemed compliance with the applicable requirements identified in Attachment "C" of this permit. The permit shield shall not apply to any changes made pursuant to Section XVI.B of this Attachment and Section XVII of this Attachment.

XXII. ACID RAIN

A. When provisions or requirements of the regulations incorporated pursuant to A.A.C. R18-2-333.A (Acid Rain) conflict with any of the applicable requirements, the regulations incorporated by A.A.C. R18-2-333.A (Acid Rain) shall apply and take precedence. [A.A.C. R18-2-333]

B. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to acid rain program, provided that such increases do not require a permit revision under any other applicable requirement. [A.A.C. R18-2-306.A.6.a]

C. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement. [A.A.C. R18-2-306.A.6.b]

D. Any such allowance shall be accounted for according to the procedures established in regulations promulgated under Title IV of the Act. [A.A.C. R18-2-306.A.6.c]

E. All of the following are prohibited:

1. Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners or the operators of the unit or the designated representative of the owners or the operators as of the applicable allowance transfer deadline;

2. Exceedances of applicable emission rates;

3. The use of any allowance prior to the year for which it was allocated; and

4. Contravention of any other provision of the permit.

[A.A.C. R18-2-306.A.6.d]

ATTACHMENT "B": SPECIFIC CONDITIONS

Air Quality Control Permit No. 1000940
For
Griffith Energy LLC

I. EMISSION LIMITS/STANDARDS

A. Combustion turbine generators (CTGs), Units 1 and 2 and heat recovery steam generators (HRSGs), Units 1 and 2 in combined cycle operation with supplemental duct firing. Emission limits presented apply to each unit.

1. Startup, Shutdown and Malfunction

a. Startup and Shutdown

Start-up means the setting in operation of a combustion turbine up to the point of achieving a 60 percent load. The overall start-up period (from first fuel firing until achieving 60 percent load) shall be less than five hours. During this time, emissions shall be limited to 5.2 lb/min of NOx, 124 lb/min. of CO, and 28.5 lb/min for VOC, based on a 3-hour averaging time. Shutdown means the point where the combustion turbine load falls below 60 percent to a point where the fuel supply can be cut off from the unit. Shut down emissions shall be limited to 5.2 lb/min of NOx, 124 lb/min. of CO, and 28.5 lb/min for VOC, based on a 3-hour averaging time. Startup and shutdown periods shall not exceed 1200 hours per year per unit.

[A.A.C. R18-2-406.A.4]

b. Malfunction

Malfunction means any sudden and unavoidable failure of air pollution control equipment, process equipment or a process to operate in a normal and usual manner, but does not include failures that are caused by poor maintenance, careless operation or any other upset condition or equipment breakdown which could have been prevented by the exercise of reasonable care. [A.A.C. R18-2-101.62]

2. Opacity Standard

The opacity of emissions from the stack of each unit shall not be greater than 10 percent based on a six-minute average. [A.A.C. R18-2-406.A.4, R18-2-331, Material Permit Condition]

3. Particulate Matter Limits

Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain particulate matter in excess of any of the following limits: 28.2 lb/hr, or 5.2 nanograms per joule heat input (0.012 lb per million Btu), based on a 3-hour averaging time, derived from the high heating value of the natural gas.

[A.A.C. R18-2-406A.4]

4. Sulfur Dioxide Limits

Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain sulfur dioxide in excess of any of the following limits: 5.7 lb/hr, or 0.99 nanograms per joule heat input (0.0023 lb per million Btu), based on a 3-hour averaging time, derived from the high heating value of the natural gas.

[A.A.C. R18-2-406A.4]

5. Nitrogen Oxide limits

Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain nitrogen oxides in excess of any of the following limits: 28.6 lb/hr, or 3.0 ppmvd at 15% O_2, based on a 3-hour averaging time. [A.A.C. R18-2-406A.4]

6. Carbon Monoxide limits

Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain carbon monoxide in excess of any of the following limits: 98.5 lb/hr, or 20 ppmvd at 15% O_2, based on a 3-hour averaging time. [A.A.C. R18-2-406A.4]

7. Volatile Organic Compounds Limits

Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain volatile organic compounds in excess of any of the following limits: 35.2 lb/hr, or 6.3 nanograms per joule heat input (0.015 lb per million Btu) derived from fossil fuel, based on a 3-hour averaging time. [A.A.C. R18-2-406A.4]

8. Fuel Limitation

Permittee shall burn only pipeline quality natural gas containing no more than 0.75 grains sulfur/100 dscf as fuel in the units. [A.A.C. R18-2-406A.4]

B. CTGs, Units 1 and 2 and HRSGs, Units 1 and 2 in combined cycle operation without supplemental duct firing. Emission limits presented apply to each unit.

1. Startup, Shutdown, and Malfunction

a. Startup and Shutdown

Start-up means the setting in operation of combustion turbines up to the point of achieving a 60 percent load. The overall start-up period (from first fuel firing until achieving 60 percent load) shall be less than five hours. During this time, emissions shall be limited to 5.2 lb/min of NOx, 124 lb/min. of CO, and 28.5 lb/min for VOC, based on a 3-hour averaging time. Shutdown means the point where the combustion turbines load falls below 60 percent to a point where the fuel supply can be cut off from the unit. Shut down emissions shall be limited to 5.2 lb/min of NOx, 124 lb/min. of CO, and 28.5 lb/min for VOC, based on a 3-hour averaging time. Startup and shutdown periods shall not exceed 1200 hours per year per unit.

[A.A.C. R18-2-406.A.4]

b. Malfunction

Malfunction means any sudden and unavoidable failure of air pollution control equipment, process equipment or a process to operate in a normal and usual manner, but does not include failures that are caused by poor maintenance, careless operation or any other upset condition or equipment breakdown which could have been prevented by the exercise of reasonable care. [A.A.C. R18-2-101.62]

2. Opacity Standard

The opacity of emissions from the stack of each unit shall not be greater than 10 percent based on a six-minute average. [A.A.C. R18-2-406.A.4, R18-2-331, Material Permit Condition]

3. Particulate Matter Limits

Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain particulate matter in excess of any of the following limits: 17.8 lb/hr, or 4.7 nanograms per joule heat input (0.011 lb per million Btu), based on a 3-hour averaging time, derived from the high heating value of the natural gas.

[A.A.C. R18-2-406A.4]

4. Sulfur Dioxide Limits

Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain sulfur dioxide in excess of any of the following limits: 4.2 lb/hr, or 0.99 nanograms per joule heat input (0.0023 lb per million Btu), based on a 3-hour averaging time, derived from the high heating value of the natural gas.

[A.A.C. R18-2-406A.4]

5. Nitrogen Oxide Limits

Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain nitrogen oxides in excess of any of the following limits: 21.1 lb/hr, or 3.0 ppmvd at 15% O_2, based on a 3-hour averaging time. [A.A.C. R18-2-406A.4]

6. Carbon Monoxide Limits

Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain carbon monoxide in excess of any of the following limits: 29.5 lb/hr, or 10 ppmvd at 15% O_2 per unit during base load operation, based on a 3-hour rolling average. Base load operation is defined as operation at or above 160 MW per CTG.

[A.A.C. R18-2-406A.4]

7. Volatile Organic Compounds Limits

Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain volatile organic compounds in excess of any of the following limits: 7.4 lb/hr, or 1.7 nanograms per joule heat input (0.0041 lb per million Btu) derived from fossil fuel, based on a 3-hour averaging time. [A.A.C. R18-2-406A.4]

8. Fuel Limitation

Permittee shall burn only pipeline quality natural gas containing no more than 0.75 grains/100 dscf sulfur as fuel in the units. [A.A.C. R18-2-724.J]

C. Auxiliary Boiler

1. Opacity Standard

The opacity of emissions from the stack shall not be greater than 10 percent based on a six-minute average. [A.A.C. R18-2-406A.4, Material Permit Condition]

2. Particulate Matter Limits

Permittee shall not cause to be discharged into the atmosphere any gases which contain particulate matter in excess of any of the following limits: 0.19 lb/hr, or 2.2 nanograms per joule heat input (0.0050 lb per million Btu), based on a 3-hour averaging time, derived from the high heating value of the natural gas. [A.A.C. R18-2-406A.4]

3. Sulfur Dioxide Limits

Permittee shall not cause to be discharged into the atmosphere any gases which contain sulfur dioxide in excess of any of the following limits: 0.09 lb/hr, or 0.99 nanograms per joule heat input (0.0024 lb per million Btu), based on a 3-hour averaging time, derived from the high heating value of the natural gas. [A.A.C. R18-2-406A.4]

4. Nitrogen Oxide Limits

Permittee shall not cause to be discharged into the atmosphere any gases which contain nitrogen oxides in excess of any of the following limits: 3.5 lb/hr, or 40 nanograms per joule heat input (0.092 lb per million Btu), based on a 3-hour averaging time, derived from the high heating value of the natural gas. [A.A.C. R18-2-406A.4]

5. Carbon Monoxide Limits

Permittee shall not cause to be discharged into the atmosphere any gases which contain carbon monoxide in excess of any of the following limits: 2.1 lb/hr, or 24 nanograms per joule heat input (0.055 lb per million Btu), based on a 3-hour averaging time, derived from the high heating value of the natural gas. [A.A.C. R18-2-406A.4]

6. Volatile Organic Compounds Limits

Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain volatile organic compounds in excess of any of the following limits: 0.49 lb/hr, or 5.6 nanograms per joule heat input (0.013 lb per million Btu), based on a 3-hour averaging time, derived from the high heating value of the natural gas.

[A.A.C. R18-2-406A.4]

7. Fuel Limitation

Permittee shall burn only pipeline quality natural gas containing no more than 0.75 grains sulfur/100 dscf as fuel. [A.A.C. R18-2-406A.4]

D. Main Cooling Tower

1. Opacity Standard

Permittee shall not cause, allow or permit to be emitted into the atmosphere any plume or effluent the opacity of which exceeds 5 percent, based on a 6-minute averaging time.
[A.A.C. R18-2-406.A.4, Material Permit Condition]

2. Particulate Matter Limits

Permittee shall not cause to be discharged into the atmosphere any gases which contain particulate matter in excess of any of the following limits: 5.9 lb/hr, or 0.83 lb/million gallon of circulating water flow. [A.A.C. R18-2-406A.4]

3. Permittee shall not emit gaseous or odorous materials from equipment, operations, or premises in such quantities or concentrations so as to cause air pollution.
[A.A.C. R18-2-730.D]

4. Where a stack, vent, or other outlet is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution is discharged to adjoining property, the Director may require the installation of abatement equipment or the alteration of such stack, vent, or other outlet by the Permittee thereof to a degree that will adequately dilute, reduce, or eliminate the discharge of air pollution to adjoining property.
[A.A.C. R18-2-730.G]

E. Chiller Cooling Tower

1. Opacity Standard

Permittee shall not cause, allow or permit to be emitted into the atmosphere any plume or effluent the opacity of which exceeds 5 percent, based on a 6-minute averaging time.
[A.A.C. R18-2-406.A.4, Material Permit Condition]

2. Particulate Matter Limits

Permittee shall not cause to be discharged into the atmosphere any gases which contain particulate matter in excess of any of the following limits: 1.4 lb/hr, or 0.88 lb/million gallon of circulating water flow. [A.A.C. R18-2-406A.4]

3. Permittee shall not emit gaseous or odorous materials from equipment, operations, or premises in such quantities or concentrations so as to cause air pollution.
[A.A.C. R18-2-730.D]

4. Where a stack, vent, or other outlet is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution is discharged to adjoining property, the Director may require the installation of abatement equipment or the alteration of such

stack, vent, or other outlet by the Permittee thereof to a degree that will adequately dilute, reduce, or eliminate the discharge of air pollution to adjoining property.

[A.A.C. R18-2-730.G]

F. Non-Point Sources

Open Areas, Roadways & Streets, Storage Piles, and Material Handling

1. Permittee shall not cause, allow or permit visible emissions from any nonpoint source in excess of 40 percent opacity, in accordance with the Arizona Testing Manual, Reference Method 9. [A.A.C. R18-2-610]

2. Permittee shall employ the following reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne:

   a. Within 90 days following commencement of commercial operation, all roads, parking lots, and any other areas with frequent vehicular traffic shall be paved. Service or maintenance roads that are used infrequently shall be graveled or otherwise treated with dust suppressants, adhesive soil stabilizer, or wetting agents to control dust. Infrequently used roads include those which provide access to and around the brine disposal pond, the fuel gas metering station, the transmission lines, and the construction heavy equipment haul road. [A.A.C. R18-2-406.A.4]

   b. Use approved dust suppressants, adhesive soil stabilizer, paving, covering, detouring, or wetting agents on, or bar access to open areas during construction operations, repair operations, demolition activities, clearing operations, and leveling operations, or when any earth is moved or excavated; [A.A.C. R18-2-604.A]

   c. Use approved dust suppressants, temporary paving, detouring or wetting agents when a roadway is repaired, constructed, or reconstructed. [A.A.C. R18-2-605.A]

G. Other Periodic Activities

1. Mobile Sources

   a. Classification

      The requirements of this condition are applicable to mobile sources which either move while emitting air contaminants or are frequently moved during the course of their utilization but are not classified as motor vehicles, agricultural vehicles, or are agricultural equipment used in normal farm operations. Mobile sources shall not include portable sources as defined in A.A.C. R18-2-101.84.

      [A.A.C. R18-2-801]

   b. Roadway and Site Cleaning Machinery

      Permittee shall not cause, allow or permit to be emitted into the atmosphere from any roadway and site cleaning machinery smoke or dust for any period greater than ten consecutive seconds, the opacity of which exceeds 40 percent. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes. [A.A.C. R18-2-804.A]

2. Nonvehicle Air Conditioner Maintenance and/or Services

The Permittee shall comply with the applicable requirements of 40 CFR 82 - Subpart F (Protection of Stratospheric Ozone - Recycling and Emissions Reduction).

[40 CFR 82, Subpart F]

H. Sulfuric Acid and Sodium Hydroxide Tanks

Permittee shall process, store, use, and transport materials including solvents or volatile compounds in such a manner and by such means that they will not evaporate, leak, escape, or be otherwise discharged into the atmosphere so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage, or discharge, the installation and usage of such control methods, devices, or equipment shall be mandatory. [A.A.C. R18-2-730.F]

II. AIR POLLUTION CONTROL EQUIPMENT [A.A.C. R18-2-331, A.A.C. R18-2-406.A.1]

A. CTG/HRSG Units

At all times, including periods of startup, shutdown, and malfunction, Permittee shall, to the extent practicable, maintain and operate the Low-NOx Burners and SCR system in a manner consistent with good air pollution control practice for minimizing nitrogen oxide emissions.

[Material Permit Condition]

B. Auxiliary Boiler

At all times, including periods of startup, shutdown, and malfunction, Permittee shall, to the extent practicable, maintain and operate the Low-NOx Burners and Flue Gas Recirculation (FGR) system in a manner consistent with good air pollution control practice for minimizing nitrogen oxide emissions.

[Material Permit Condition]

C. Main Cooling Tower and Chiller Cooling Tower

At all times, including periods of startup, shutdown, and malfunction, Permittee shall, to the extent practicable, maintain and operate the high efficiency Drift Eliminator systems in a manner consistent with good air pollution control practice for minimizing particulate matter emissions.

[Material Permit Condition]

III. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

A. By the start of construction, the owner or operator shall have on site a person that is certified in EPA Reference Method 9 for the observation and evaluation of visible emissions.

[A.A.C. R18-2-306.A.3]

B. At the time the compliance certifications required by Section VII of Attachment "A" are submitted, the Permittee shall submit reports of all monitoring activities required by Section III of this Attachment performed in the same six month period as applies to the compliance certification period.

[A.A.C. R18-2-306.A.5.a]

C. Monitoring, Recordkeeping, and Reporting Requirements for CTG (Units 1 and 2) and HRSG (Units 1 and 2)

1. Monitoring for NO_x, and CO_2 or O_2

a. Permittee shall install, calibrate, maintain, and operate continuous monitoring systems (CEMS) for measuring emissions of nitrogen oxides, and carbon dioxide or oxygen.
[40 CFR 60.47a, Material Permit Condition]

b. The CEMS for NO_x, and CO_2 or O_2 shall meet the following requirements:

(1) 40 CFR Part 75, Appendix A, "Specification and Test Procedures"

(a) Installation and measurement location
(b) Equipment specifications
(c) Performance specifications
(d) Data acquisition and handling systems
(e) Calibration gas
(f) Certifications tests and procedures
(g) Calculations

(2) 40 CFR Part 75, Appendix B, "Quality Assurance and Quality Control Procedure"

(a) Quality control program
(b) Frequency of testing

(3) 40 CFR Part 75 Appendix C, "Missing Data Estimation Procedures"

Load-Based Procedure for Missing Flow Rate and NO_x Emission Rate Data

(4) 40 CFR Part 75 Appendix F, "Conversion Procedures"

Procedures for NO_x Emission Rate

(5) Data Reduction

Permittee shall comply with the data reduction requirements of 40 CFR Part 75.10(d)(1).

c. Permittee shall comply with all the applicable recordkeeping and reporting requirements of 40 CFR Part 75 Subparts F and G respectively.

d. Permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.
[40 CFR 60.7(f)]

2. Monitoring for Carbon Monoxide

a. Permittee shall install, calibrate, maintain, and operate continuous monitoring systems (CEMS) for measuring emissions of carbon monoxide.

[A.A.C. R18-2-406.A.4, Material Permit Condition]

b. The CEMS for CO shall meet the following requirements:

(1) 40 CFR Part 60, Appendix B, "Performance Specifications," Performance Specification 4A, "Specifications and test procedures for carbon monoxide continuous monitoring systems in stationary sources."

(2) 40 CFR Part 60, Appendix F, "Quality Assurance Procedures"

(3) The CO monitoring system and monitoring devices shall be installed and operational prior to conducting performance tests under section 60.8. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device. [40 CFR 60.13(b)]

(4) Permittee shall conduct a performance evaluation of the CO CEMS during any performance test required under Section IV of this Attachment or within 30 days thereafter in accordance with the applicable performance specification in Appendix B of 40 CFR part 60. Permittee shall conduct CEMS performance evaluation at such other times as may be required by the Department under section 114 of the Act. [40 CFR 60.13(c)]

(5) Except as provided in paragraph (4) of this section, Permittee shall furnish the Department within 60 days of completion two or upon request, more copies of a written report of the results of the performance evaluation.

. [40 CFR 60.13(c)(2)]

(6) Permittee shall check the zero (or low-level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily in accordance with a written procedure. The zero and span shall, as a minimum, be adjusted whenever the 24-hour zero drift or 24-hour span drift exceeds two times the limits of the applicable performance specifications in Appendix B. The system must allow the amount of excess zero and span drift measured at the 24-hour interval checks to be recorded and quantified, whenever specified.

[40 CFR 60.13(d)(1)]

(7) Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under paragraph (6) of this section, Permittee shall meet minimum frequency of operation requirements as follows:
The CO CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. [40 CFR 60.13(e), 60.13(e)(2)]

(8) 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period. Data recorded during periods of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages

computed under this paragraph. An arithmetic or integrated average of all data may be used. The data may be recorded in reduced or nonreduced form (e.g., ppm pollutant and percent O_2 or ng/J of pollutant). All excess emission shall be converted into units of the standard using the appropriate conversion procedures specified in applicable subparts. After conversion into the units of the standard, the data may be rounded to the same number of significant digits ans used in the applicable subparts to specify the emission limit. [40 CFR 60.13(h)]

c. Permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records. [40 CFR 60.7(f)]

3. Monitoring for Sulfur Dioxide

a. Permittee shall maintain a vendor-provided copy of that part of the Federal Energy Regulatory Commission (FERC)-approved tariff agreement that contains the sulfur content and the lower heating value of the pipeline quality natural gas. [A.A.C. R18-2-406.A.4]

b. Permittee shall calculate SO_2 emissions in accordance with 40 CFR 75 Appendix D, "SO_2 Mass Emissions Calculation for Gaseous Fuels," Section 3.3.2.

4. Monitoring for Volatile Organic Compounds [A.A.C. R18-2-306.A.3]

Annual performance tests as described in IV.B.5 shall be used to determine compliance with the emission limits for VOCs for the CTG/HRSG units as stated in I.A.7 and I.B.7. An initial performance test as described in IV.C.2 shall be used to determine compliance with the emission limits for VOCs from the CTGs/HRSGs as stated in Sections I.A. and I.B.

5. Permittee shall maintain records of startups and shutdowns including starting time and ending time at the site.

6. Reporting Requirements

a. Excess emission and monitoring system performance (MSP) reports for CTG (Units 1 and 2) and HRSG (Units 1 and 2) shall be submitted to the Department and EPA Region IX for every calendar quarter. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter. Each excess emission and MSP report shall include the information required in 40 CFR 60.7(c). Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows: [40 CFR 60.49a(i)]

(1) Nitrogen Oxides

Excess emissions for CTG/HRSG Units 1 and 2 using a continuous monitoring system for measuring nitrogen oxides are defined as any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) exceed the applicable standards in Section I.A.5 or I.B.5 of this Attachment. [40 CFR 60.45(g)(3)]

(2) Opacity

Excess emissions for CTG (Units 1 And 2) and /HRSG (Units 1 and 2) are defined as any six-minute period during which the average opacity of emissions exceeds 10 percent opacity. [40 CFR 60.49a(h)]

(3) Sulfur Dioxide

For the purpose of reports defined under 40CFR60.7(c), periods of excess SO_2 emissions shall be defined as any daily period during which the SO_2 emissions exceed the applicable standards in Section I.A.4 or I.B.4 of this Attachment. [A.A.C. R18-2-406.A.4]

(4) Carbon Monoxide

Excess emissions for CTG/HRSG Units 1 and 2 using CEMS for measuring carbon monoxide is defined as any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) exceed the applicable standards in Section I.A.6 or I.B.6 of this Attachment. [A.A.C. R18-2-406.A.4]

b. Excess emissions indicated by the CEMS shall be considered violations of the applicable emission limit for the purposes of this permit. [A.A.C. R18-2-312.H.3]

c. The summary report form shall contain the information and be in the format shown in Figure 1 of 40 CFR 60.7(d) unless otherwise specified by the Department. One summary report form shall be submitted for each pollutant monitored at each affected facility. If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CEMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in Sec. 60.**7**(c) need not be submitted unless requested by the Department. If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CEMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in Sec. 60.7(c) shall both be submitted.

[40CFR 60.7(d)]

d. The summary quarterly report form submission required in paragraph III.C.5.c above shall be in the format specified in 40 CFR 60.7(d). The excess emissions report shall include the following information: [40 CFR 60.7(c)]

(1) The magnitude of excess emissions computed, any conversion factor(s) used, and the date and time of commencement and completion of each time

period of excess emissions. The process operating time during the reporting period.

(2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.

(3) The date and time identifying each period during which the CEMS was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

(4) When no excess emissions have occurred or the CEMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

D. Monitoring, Recordkeeping, and Reporting Requirements for Auxiliary Boiler

1. Permittee shall maintain a record of daily fuel consumption. This may be complied with by maintaining a copy of the monthly natural gas bill for the auxiliary boiler.
[40 CFR 60.48c(g)]

2. Permittee shall submit notification of the date of construction, anticipated startup, and actual startup, as provided by 40 CFR 60.7. This notification shall include: (1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility, and (2) the annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.
[40 CFR 60.48c(a)(1) and (3)]

3. Permittee shall operate the auxiliary boiler maintaining good combustion practice at all times. Good combustion practice is defined as that which is in accordance with manufacturer's specifications and which results in meeting the emission limits specified in I.C. in this section.
[A.A.C. R18-2-406.A.4]

4. An initial performance test as described in IV.D.2. shall be used to determine compliance with the emission limits for nitrogen oxides, carbon monoxide, particulate matter, and VOCs for the auxiliary boiler as stated in I.C. [A.A.C. R18-2-312]

5. Permittee shall maintain a vendor-provided copy of that part of the Federal Energy Regulatory Commission (FERC)-approved tariff agreement that contains the sulfur content and the lower heating value of the pipeline quality natural gas. [A.A.C. R18-2-406.A.4]

6. Permittee shall report all six-minute periods in which the opacity of any plume or effluent exceeds 10 percent from the auxiliary boiler. [A.A.C. R18-2-406.A.4]

E. Monitoring, Recordkeeping, and Reporting Requirements for Non-Point Sources
[A.A.C. R18-2-306.A.3.b]

Permittee shall maintain records of the dates on which any of the activities listed in I.F.2.a through c of this Attachment were performed and control measures employed.

F. Monitoring, Recordkeeping, and Reporting Requirements for Other Periodic Activities [A.A.C. R18-2-306.A.3.b]

1. Mobile Sources

Permittee shall keep a record of all emissions related maintenance activities performed on Permittee's mobile sources stationed at the facility as per manufacturer's specifications.

2. Nonvehicle Air Conditioner Maintenance and/or Services

Permittee shall keep all records required by the applicable requirements of 40 CFR 82 - Subpart F in a file and make appropriate submittals to the Administrator.

G. Monitoring, Recordkeeping, and Reporting Requirements for Main Cooling Tower and Chiller Cooling Tower

The permittee shall perform and maintain a written record of the visual inspections of the drift eliminators whenever the cooling towers are not in operation for a period of one week or longer, but at a minimum of once per year.

IV. TESTING REQUIREMENTS

A. In accordance with the EPA Reference Method 9, readings shall be defined as an average of 24 consecutive opacity observations recorded at 15-second intervals. A set is composed of any 24 consecutive observations. Sets need not be consecutive in time and in no case shall two sets overlap. For each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24. [40 CFR 60, Appendix A, Method 9, Section 2.5]

B. CTG/HRSG Units 1 and 2 Operating With Supplemental Duct Firing

1. Particulate Matter

Within 60 days after achieving the maximum production rate, but no later than 180 days after initial startup of the facility at which the CTG/HRSGs (with Supplemental Duct Firing) will be operated and at other times as may be required by the Director, the Permittee shall conduct a performance test on each CTG/HRSG (with Supplemental Duct Firing) for particulate matter using the procedures of EPA Reference Method 5 or equivalent. [40 CFR 60.8]

2. Sulfur Dioxide

Within 60 days after achieving the maximum production rate, but no later than 180 days after initial startup of the facility at which the CTG/HRSGs (with Supplemental Duct Firing) will be operated and at other times as may be required by the Director, the Permittee shall conduct a performance test on each CTG/HRSG (with Supplemental Duct Firing) for sulfur dioxide using the procedures of EPA Reference Method 19, or equivalent, in accordance with 40 CFR 60.48a(f) and 40 CFR60.335. [40 CFR 60.48a(f)]

3. Nitrogen Oxides

Within 60 days after achieving the maximum production rate, but no later than 180 days after

initial startup of the facility at which the CTG/HRSGs (with Supplemental Duct Firing) will be operated and at other times as may be required by the Director, the Permittee shall conduct a performance test on each CTG/HRSG (with Supplemental Duct Firing) for nitrogen oxides using the procedures of EPA Reference Method 20 or equivalent. [40 CFR 60.8]

4. Carbon Monoxide

Within 60 days after achieving the maximum production rate, but no later than 180 days after initial startup of the facility at which the CTG/HRSGs (with Supplemental Duct Firing) will be operated and at other times as may be required by the Director, the Permittee shall conduct a performance test on each CTG/HRSG (with Supplemental Duct Firing) for carbon monoxide using the procedures of EPA Reference Method 10 or equivalent. [40 CFR 60.8]

5. Volatile Organic Compounds

Within 60 days after achieving the maximum production rate, but no later than 180 days after initial startup of the facility at which the CTG/HRSGs (with Supplemental Duct Firing) will be operated and at other times as may be required by the Director, the Permittee shall conduct an initial performance test on each CTG/HRSG (with Supplemental Duct Firing) for VOCs using the procedures of EPA Reference Method 25a and Method 18 or equivalent. Method 25a shall be used to test for the total gaseous organic concentration. Method 18 shall be used to measure both methane and ethane concentrations. The VOC concentration shall be determined as the total gaseous organic concentration less the methane and ethane concentrations. Thereafter, Permittee shall conduct annual performance tests on each CTG/HRSG (with Supplemental Duct Firing) for VOCs using the procedures described above. [40 CFR 60.8]

6. Opacity

Within 60 days after achieving the maximum production rate, but no later than 180 days after initial startup of the facility at which the CTG/HRSGs (with Supplemental Duct Firing) will be operated and at other times as may be required by the Director, the Permittee shall conduct a performance test on each CTG/HRSG (with Supplemental Duct Firing) to determine opacity using EPA Reference Method 9 and the procedures in 40 CFR 60.11. [40 CFR 60.8(d)(3)]

C. CTG/HRSGs Without Supplemental Duct Firing, Units 1 and 2

1. Within 60 days after achieving the maximum production rate, but no later than 180 days after initial startup of the facility at which the CTG/HRSGs (without Supplemental Duct Firing) will be operated and at other times as may be required by the Director, the Permittee shall conduct a performance test on each CTG/HRSG (without Supplemental Duct Firing) for nitrogen oxides, particulate matter, VOCs, and carbon monoxide. Thereafter, Permittee shall conduct an annual performance test on CTG/HRSGs (without Supplemental Duct Firing) for VOCs. [40 CFR 60.8]

2. Permittee shall use USEPA Reference Methods 20, 10, 5, and Methods 25a and 18 to conduct the performance test for nitrogen oxides, carbon monoxide, particulate matter, and VOCs respectively as specified in Appendix A of 40 CFR Part 60. Method 25a shall be used to test for the total gaseous organic concentration. Method 18 shall be used to measure both methane and ethane concentrations. The VOC concentration shall be determined as the total gaseous organic concentration less the methane and ethane concentrations.

[40 CFR 60.8]

D. Auxiliary Boiler

1. Within 60 days after achieving the maximum production rate, but no later than 180 days after initial startup of the facility at which the Auxiliary Boiler will be operated and at other times as may be required by the Director, the Permittee shall conduct an initial performance test for nitrogen oxides, particulate matter, CO, and VOC emissions.

[A.A.C. R18-2-312]

2. Permittee shall use USEPA Reference Methods 7E (with 3A), 10, 5, and Methods 25a and 18 to conduct the performance test for nitrogen oxides, carbon monoxide, particulate matter, and VOCs respectively as specified in Appendix A of 40 CFR Part 60. Method 25a shall be used to test for the total gaseous organic concentration. Method 18 shall be used to measure both methane and ethane concentrations. The VOC concentration shall be determined as the total gaseous organic concentration less the methane and ethane concentrations. [A.A.C. R18-2-312]

V. NEW SOURCE PERFORMANCE STANDARDS

Except as otherwise explicitly required in this permit, the CTG/HRSG units and the auxiliary boiler are subject to the Standards of Performance for New Stationary Sources (NSPS) 40 CFR 60, Subpart A, and Subparts GG, Da, and Dc, respectively, including all emission limits and all notification, testing, monitoring, and reporting requirements.

VI. OTHER LIMITATIONS

The Director shall terminate this permit, if the proposed construction is not begun within 18 months of issuance or, if during the construction, work is suspended for more than 18 months. [A.A.C. R18-2-402.D.4]

ATTACHMENT "C": APPLICABLE REQUIREMENTS

Air Quality Control Permit No. 1000940
For
Griffith Energy LLC

REQUIREMENTS SPECIFICALLY IDENTIFIED AS APPLICABLE

Except for Acid Rain Provisions, compliance with the terms contained in this permit shall be deemed compliance with the following federally applicable requirements in effect on the date of permit issuance:

ARIZONA ADMINISTRATIVE CODE (A.A.C.) TITLE 18, Chapter 2

ARTICLE 4	**PERMIT REQUIREMENTS FOR NEW MAJOR SOURCES AND MAJOR MODIFICATIONS TO EXISTING MAJOR SOURCES**
R18-2-406	General
R18-2-406	Permit Requirements for Sources Located in Attainment and Unclassifiable Areas
R18-2-407	Air Quality Impact Analysis and Monitoring Requirements
R18-2-409	Air Quality Models
R18-2-410	Visibility Protection
ARTICLE 6	**EMISSIONS FROM EXISTING AND NEW NONPOINT SOURCES**
R18-2-601	General
R18-2-604	Open Areas, Dry Washes, or Riverbeds
R18-2-605	Roadways and Streets
R18-2-610	Evaluation of Nonpoint Source Emissions
ARTICLE 7	**EXISTING STATIONARY SOURCE PERFORMANCE STANDARDS**
R18-2-730	Standards of Performance for Unclassified Sources
ARTICLE 8	**EMISSIONS FROM MOBILE SOURCES (NEW AND EXISTING)**
R18-2-801	Classification of Mobile Sources
R18-2-804	Roadway and Site Cleaning Machinery
ARTICLE 9	**NEW SOURCE PERFORMANCE STANDARDS**
R18-2-901.1	40 CFR 60, Subpart A, General Provisions
R18-2-901.3	40 CFR 60, Subpart Da, Electric Utility Steam Generating Units for which Construction is Commenced After September 18, 1978
R18-2-901.5	40 CFR 60, Subpart Dc, Small Industrial Commercial-Institutional Steam Generating Units
R18-2-901.39	40 CFR 60, Subpart GG, Stationary Gas Turbines
R18-2-902	General Provisions

ARIZONA REVISED STATUTES(A.R.S.), CHAPTER 3, ARTICLE 2

A.R.S. 49-426	Permits; duties of director; exceptions; applications; objections; fees (STATE REQUIREMENT)

ACCIDENTAL RELEASE PREVENTION PROGRAM

40 CFR 68	Chemical Accident Prevention Provisions (Applicability of this regulation will be determined by the quantity of any regulated substances that will be present on-site**)**

ACID RAIN PROVISIONS

40 CFR 72	Permits Regulation
40 CFR 73	Sulfur Dioxide Allowance System
40 CFR 74	Sulfur Dioxide Opt-ins
40 CFR 75	Continuous Emission Monitoring
40 CFR 76	Acid Rain Nitrogen Oxides Emission Reduction Program

ATTACHMENT "D": PROCESS AND CONTROL EQUIPMENT LIST

Air Quality Control Permit No. 1000940
For
Griffith Energy LLC

Permitted Equipment					
Equipment ID	**Description**	**Nominal Rating[1]**	**Serial Number**	**Model**	**Date of Commercial Operation/ Manufacture**
CTG 1 & 2	Combustion Turbine Generator	180 MW	TBD	Westinghouse 501F[2]	TBD
HRSG 1 & 2 With Supplemental Firing[3]	Heat Recovery Steam Generator	650 MMBtu/hr	TBD	TBD	TBD
Auxiliary Boiler	Auxiliary Boiler	38 MMBtu/hr	TBD	TBD	TBD
Main Cooling Tower	Main Cooling Tower-evaporative	120,000 gal/min	TBD	TBD	TBD
Chiller Cooling Tower	Chiller Cooling Tower-evaporative	27,000 gal/min	TBD	TBD	TBD
SCR	Catalyst	NA	TBD	TBD	TBD
CTG Low NOx Burners	Combustor	NA	TBD	TBD	TBD
Auxiliary Boiler Low NOx Burners	Combustor	NA	TBD	TBD	TBD
Auxiliary Boiler Flue Gas Recirculation	Ductwork System	NA	TBD	TBD	TBD
Sulfuric Acid Tank	Tank	TBD	TBD	TBD	TBD
Sodium Hydroxide Tank	Tank	TBD	TBD	TBD	TBD

Notes: 1. Approximate capacity of the unit
2. Or similar “F” Class combustion turbine.

3. HRSGs can operate without supplemental firing, and in such instances there will be zero capacity based on fueling rate.
4. TBD: To be disclosed.

ATTACHMENT "E": INSIGNIFICANT ACTIVITIES

Air Quality Control Permit No. 1000940
For
Griffith Energy LLC

No.	POTENTIAL EMISSION POINTS CLASSIFIED AS "INSIGNIFICANT ACTIVITIES" PURSUANT TO A.A.C. R18-2-101.54
1	Building HVAC Exhaust Vents
2	Turbine Compartment Ventilation Exhaust Vents
3	Sanitary Sewer Vents
4	Compressed Air Systems
5	Turbine Lube Oil Vapor Extractors and Lube Oil Mist Eliminator Vents
6	Steam Drum Safety Relief Valve Vents
7	Building Air Conditioning Units
8	Emergency Diesel Fire Pump Exhaust Stack
9	Emergency Diesel Fire Pump Fuel Storage Tank
10	Various Steam Release Vents
11	Welding Equipment
12	Lab Hood Vents
13	Water Wash System Storage Tank Vents
14	Neutralization Basin
15	Sodium Hypochlorite Storage Tank
16	Hydrazine Storage Tank Vent
17	Fuel Purge Vents
18	Oil/Water Separator Waste Oil Collection Tank Vents
19	Condenser Vacuum Pump Vents

ATTACHMENT "F": PHASE II ACID RAIN PROVISIONS

Air Quality Control Permit No. 1000940
For
Griffith Energy LLC

I. Statement of Basis

Statutory and Regulatory Authorities: In accordance with Arizona Revised Statutes, Title 49, Chapter 3, Article 2, Section 426.N, and Titles IV and V of the Clean Air Act, the Arizona Department of Environmental Quality issues this Phase II Acid Rain Permit pursuant to Arizona Administrative Code, Title 18, Chapter 2, Article 3, Section 333 (A.A.C. R18-2-333), "Acid Rain".

II. SO_2 Allowance† Allocations and NO_x Requirements for Each Affected Unit

		1998	1999	2000	2001	2002	2003	2004
Unit P1	SO_2 allowances under Tables 2, 3, or 4 of 40 CFR part 73	NA	NA	NA	NA	NA	NA	NA
	NO_x limit	This unit is not subject to a NO_x limit under 40 CFR Part 76.						

		1998	1999	2000	2001	2002	2003	2004
Unit P2	SO_2 allowances under Tables 2, 3, or 4 of 40 CFR part 73	NA	NA	NA	NA	NA	NA	NA
	NO_x limit	This unit is not subject to a NO_x limit under 40 CFR Part 76.						

		1998	1999	2000	2001	2002	2003	2004
Unit P3	SO_2 allowances under Tables 2, 3, or 4 of 40 CFR part 73	NA	NA	NA	NA	NA	NA	NA
	NO_x limit	This unit is not subject to a NO_x limit under 40 CFR Part 76.						

† As defined under 40 CFR §72.2, "Allowance" means an authorization by the Administrator under the Acid Rain Program to emit up to one ton of sulfur dioxide during or after a specified calendar year.

III. Comments, Notes and Justifications

None.

IV. Permit Application

The Permittee, and any other owners or operators of the units at this facility, shall comply with the requirements contained in the attached acid rain permit application (OMB No. 2060-0258) signed by the Designated Representative Dana L. Diller on May 7, 1999.